

TRADE NAME	Halicrafters Model 5R10A													
MANUFACTURER	Halicrafters C., Inc., 4401 W. 5th Ave., Chicago Ill.													
TYPE SET	AC-DC Operated Multi-Band Superheterodyne Receiver													
TUBES (five)	Types 12SA7 Conv., 12SK7 IF Amp., 12SQ7 Det.-AVC-AF Amp. 50L6GT Power Output, 35Z5GT Rectifier													
POWER SUPPLY	105-125 Volts AC-DC (Band #1) 540-1650KC, (Band #2) 1, 65-5.1MC, (Band #3) 5-14.5 MC, (Band #4) 13-31 MC													
RATING .25 Amp. @ 117 Volts AC														
TUNING RANGE														
ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT														
To set pointer turn tuning gang fully closed and set pointer to the reference mark to the left of 55 on the BC scale. To set band spread pointer, turn bandspread tuning gang fully open and set pointer to zero on the reference scale. The RMA dummy antenna referred to in the alignment table consists of a 200 MMF capacitor in series with a 20 micro-henry choke which is shunted by a 400MMF capacitor in series with a 400Ω carbon resistor. Turn the bandspread dial to zero on the reference scale.														
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS							
1. .01MFD	High side to stator on front section of tuning gang. Low side to chassis.	456KC (400Ω Mod.)	1	1000KC	Across voice coil	A1, A2, A3, A4	Adjust for maximum output. If isolation transformer is not used, reduce dummy antenna to .0001MFD to reduce hum modulation.							
2. RMA	High side thru dummy to antenna terminal A1(connect jumper between A2 and G) Low side to chassis.	30MC	4	30MC	"	A5, A6	Adjust for maximum output. Rock tuning gang while adjusting A6.							
3. "	"	14MC	3	14MC	"	A7, A8	Adjust for max. output. Rock tuning gang while adjusting A7.							
4. "	"	5MC	2	5MC	"	A9, A10	Adjust for maximum output. Rock tuning gang while adjusting A9.							
5. "	"	1500KC	1	1500KC	"	A11, A12	Adjust for maximum output.							
6. "	"	600KC	1	600KC	"	A13	Repeat steps 5&6 until no further improvements can be made.							

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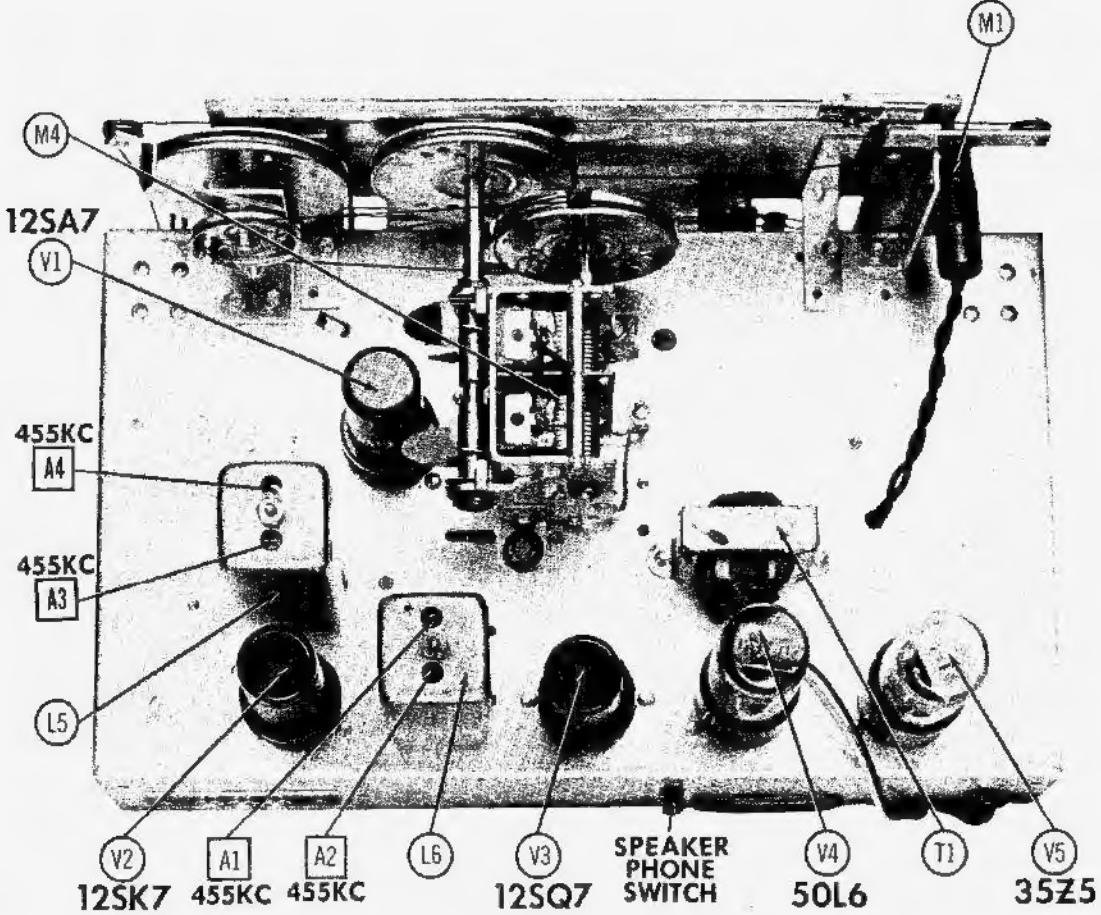
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PARTS LIST AND DESCRIPTIONS

CHASSIS—TOP VIEW

TUBES (SYLVANIA or Equivalent)			
ITEM No.	USE	HALLICRAFTER PART No.	REPLACEMENT DATA
V1	Converter	60X12SA7	12SA7
V2	IF Amplifier	60X12SK7	12SK7
V3	Detector-AVC-AF Amplifier	60X35GTGT	12SQ7GT
V4	Power Output	90X35L6GT	50L6GT
V5	Rectifier	90X35Z5GT	35Z5GT



CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in micros. for Mica and Ceramic Capacitors.

ITEM No.	RATING CAP. VOLTS	HALLICRAFTER PART No.	REPLACEMENT DATA		SPARAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
			CORNELL-DURRER PART No.	CENTRALAB PART No.		
C1A	.00	45B08I	[PR5150/40-40]	PR5150/25	ET255515C	TVA-12M5 Filter (Yellow)
B	.40	150	1464-003	D6-22I	5W5T25	Output Coupling (Yellow)
C	.20	150	1468-00025	DD-503	IR5D3	Fixed Padder
C2	2700	500	47X30B2T2J	BPD-005	ID5D5	1+M-325 R.F. Coupling
C3	220	500	47B2022J5	47A106	3R5T25	Conv., Plate Dar., Osc., Grid Cap.
C4	5000	500	47X20B22JK	1469-00025	IR5D3	MH-28 Fixed Padder
C5	220	500	47X30B302J	1464-003	ID5D5	AVC Filter
C6	3600	500	47X30B302J	1464-0025	5W5T25	Osc. Feedback
C7	2200	500	47X30B222J	BPD-005	IR5D5	6T-M-32
C8	.02	650	46AY203J	PT682	PT682	IF Amp., Decoupling
C9	.02	650	46AY203J	P682-02	PTE6P1	IF Amp., Cathode Bypass
C10	.1	500	45A2104J	DF-104	PTE4S5	2TM-S5 Diode & RF Filter
C11	.05	200	45AU503J	DF-503	5W5T25	1+M-325 Diode & RF Filter
C12	.20	3600	47B2022JK5	DF-22I	GP5K-22I	Diode RF Filter
C13A	.20	1220	1464-00025	S1220	5W5T25	Audio Coupling
B	.003	46A15I	P688-002	D6-202	PTE6D2	A.F. Amp., Plate
C	.20	1220	P688-005	D6-22I	SW5T25	Audio Coupling
D	.005	600	46AZ101J	D6-502	GP5K-32I	Power Output Stage
C14	.01	600	46AY203J	D6-103	PTE605	6TM-S1 Line Isolation
C15	.03	600	46AY203J	P688-02	12T6S5	4TM-S2
C16	.02	400	46BR203LG	1468-02	LPT64S2	6TM-S5
C17	.05	600	46AY203J	P688-05	PTE6S5	Attach to RIA per instructions

* Some models use 100MMMF in this application (Part No. 47X220R10K)

CONTROLS

ITEM No.	RATING	HALLICRAFTER PART No.	REPLACEMENT DATA	INSTALLATION NOTES
R1A	RESISTANCE WATTS	2 Meg. Shaft	Q13-109 Not Req. Not Req.	Volume Control Attach to RIA per instructions

B RS-2 SWB
C RS-1 SWB

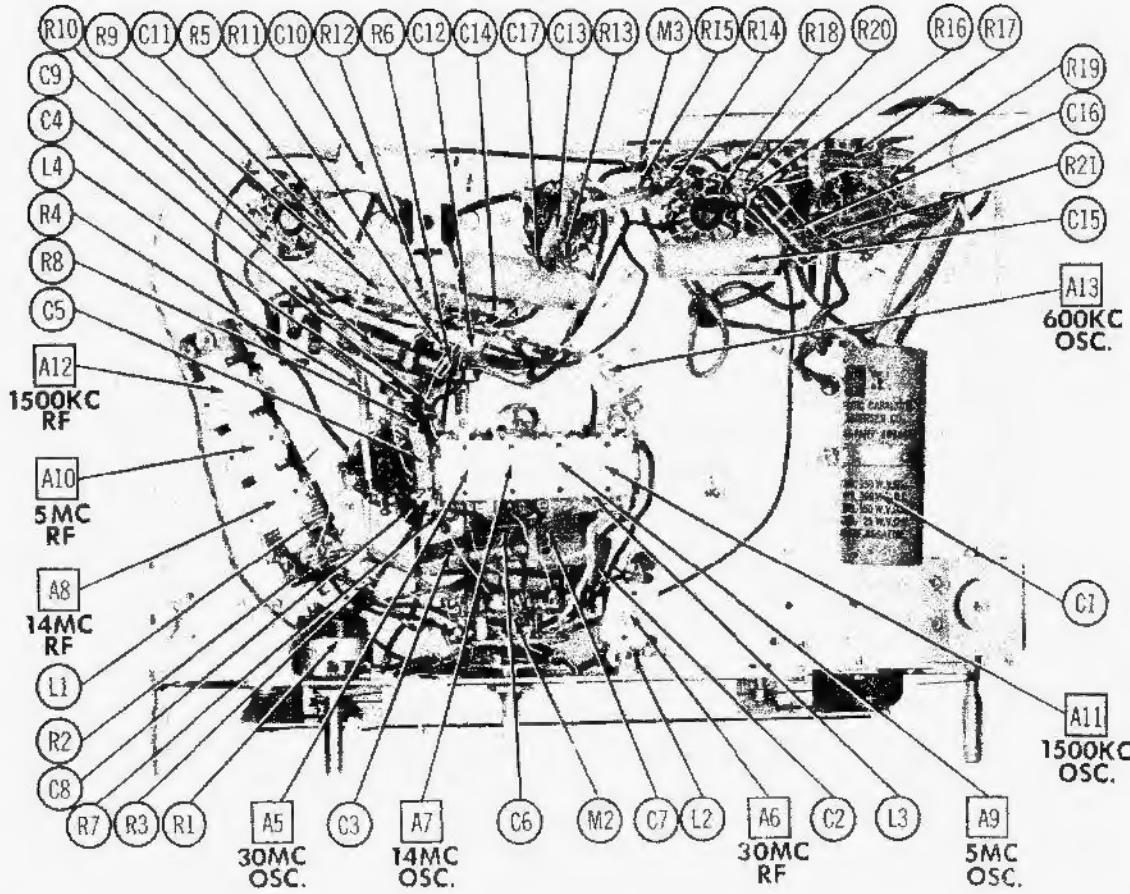
PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

ITEM No.	RATING	REPLACEMENT DATA		IDENTIFICATION CODES	
		HALLICRAFTER	H.C.	PART No.	
R2	10KΩ	2M20X103M	BTS-10K		Antenna Coll. Shunt.
R3	470KΩ	2M20X474M	BTS-470K		Converter Grd.
R4	2.2Meg	2M20X225M	BTS-2.2Meg		AVC Network
R5		2M20X225M	BTS-2.2Meg		Oscillator Grid
R6	2.2KΩ	2M20X223M	BTS-22K		Parasitic Suppressor-See note
R7	15Ω	2M20X15ΩM			IF Cathode
R8	22Ω	2M20X22ΩM			IF Amplifier Decoupling
R9	390Ω	2M20X39ΩK	BTS-39Ω		Diode Filter
R10	390Ω	2M20X39ΩK	BTS-39Ω		AF Amplifier Grid
R11	47KΩ	2M20X473M	BTS-47ΩK		AF Amplifier Plate
R12	470KΩ	2M20X474M	BTS-470K		Output Grid
R13	10Meg	2M20X10ΩM	BTS-10Meg		Output Cathode
R14	220KΩ	2M20X224M	BTS-22ΩK		Filter
R15	470KΩ	2M20X474M	BTS-470K		Surge Limiter
R16	15Ω	2M20X15ΩK	BTS-15ΩK		Head Phone Shunt
R17	22Ω	2M20X22ΩM	BTS-22Ω		Series Dial Light
R18	100Ω	2M20X10ΩK	BTS-10ΩK		
R19	22Ω	2M20X22ΩM	BTS-22Ω		
R20	15Ω	2M20X15ΩK	BTS-15Ω		
R21	15Ω	2M20X15ΩK	BTS-15Ω		

NOTE: Some models use 10Ω resistor in this application.

CHASSIS—BOTTOM VIEW



TRANSFORMER (AUDIO OUTPUT)

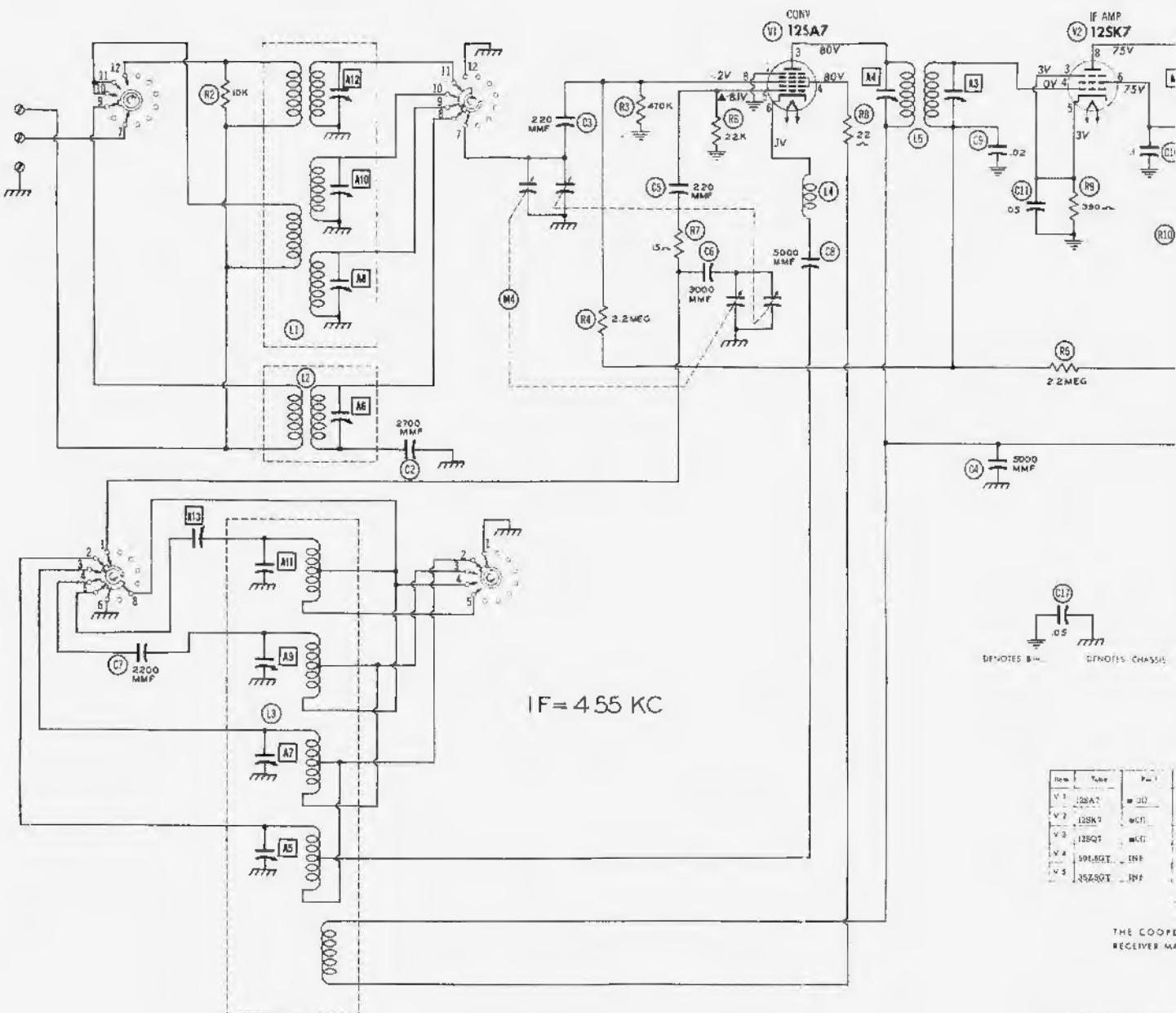
ITEM No.	RATING	REPLACEMENT DATA		INSTALLATION NOTES	
		FIELD	V. C. IMP.	BALLISTIC COILS	STANCO PART No.
T1	1.7KΩ 3.5Ω	3.2Ω	147Ω	8Ω	55A127 A-3876 A2928 R0-2

SPEAKER

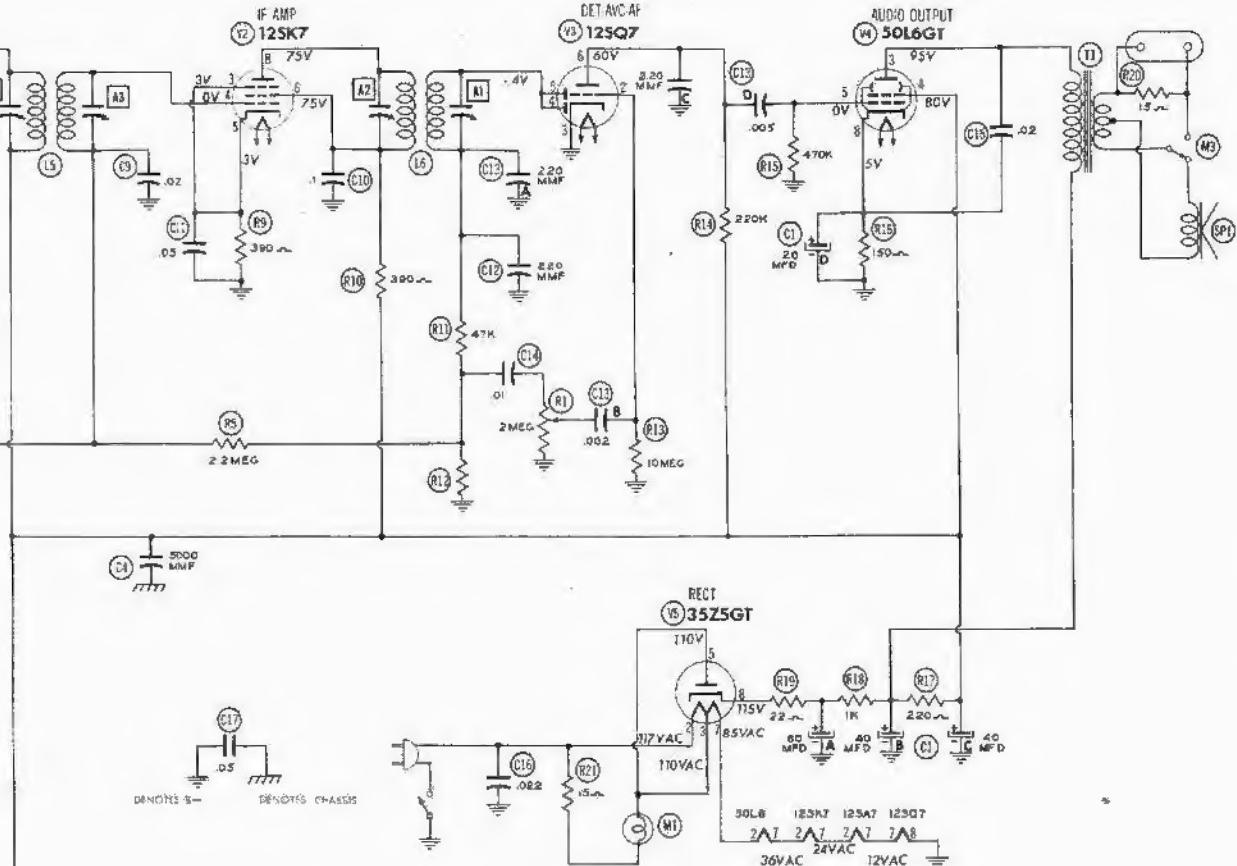
ITEM No.	RATING	REPLACEMENT DATA		NOTES	
		FIELD	V. C. IMP.	HALLICRAFTER PART No.	JENSEN PART No.
SPI	P. M.	3.2Ω	85C030	ST-105	5A1

COILS (RF-IF)

ITEM No.	USE	DC RES.	REPLACEMENT DATA		NOTES
			PR1	SEC.	
L1A	Ant. Coil	27Ω	0Ω	0Ω	Band 1
B	Ant. Coil	1Ω	0Ω	0Ω	Band 2
C	Ant. Coil	1Ω	0Ω	0Ω	Band 3
L1B	Ant. Coil	.2Ω	0Ω	0Ω	Band 4
L1C	Osc. Coil	2.4Ω	0Ω	0Ω	Band 1
L1D	Osc. Coil	.0Ω	0Ω	0Ω	Band 2
L1E	Osc. Coil	.0Ω	0Ω	0Ω	Band 3
L1F	Osc. Coil	.0Ω	0Ω	0Ω	Band 4
L4	RF Choke	9.3Ω	0Ω	53A07	Trip at 2Ω
L5	Input LF	2Ω	2Ω	5A1143	Trip at 2Ω
L6	Output LF	2Ω	2Ω	5V1B14	



1. DC Voltage measured at 1.00
2. Socket connection
3. Measured values
4. Line voltage max
5. Nominal tolerance
± 10% in voltage
6. Volume control settings.

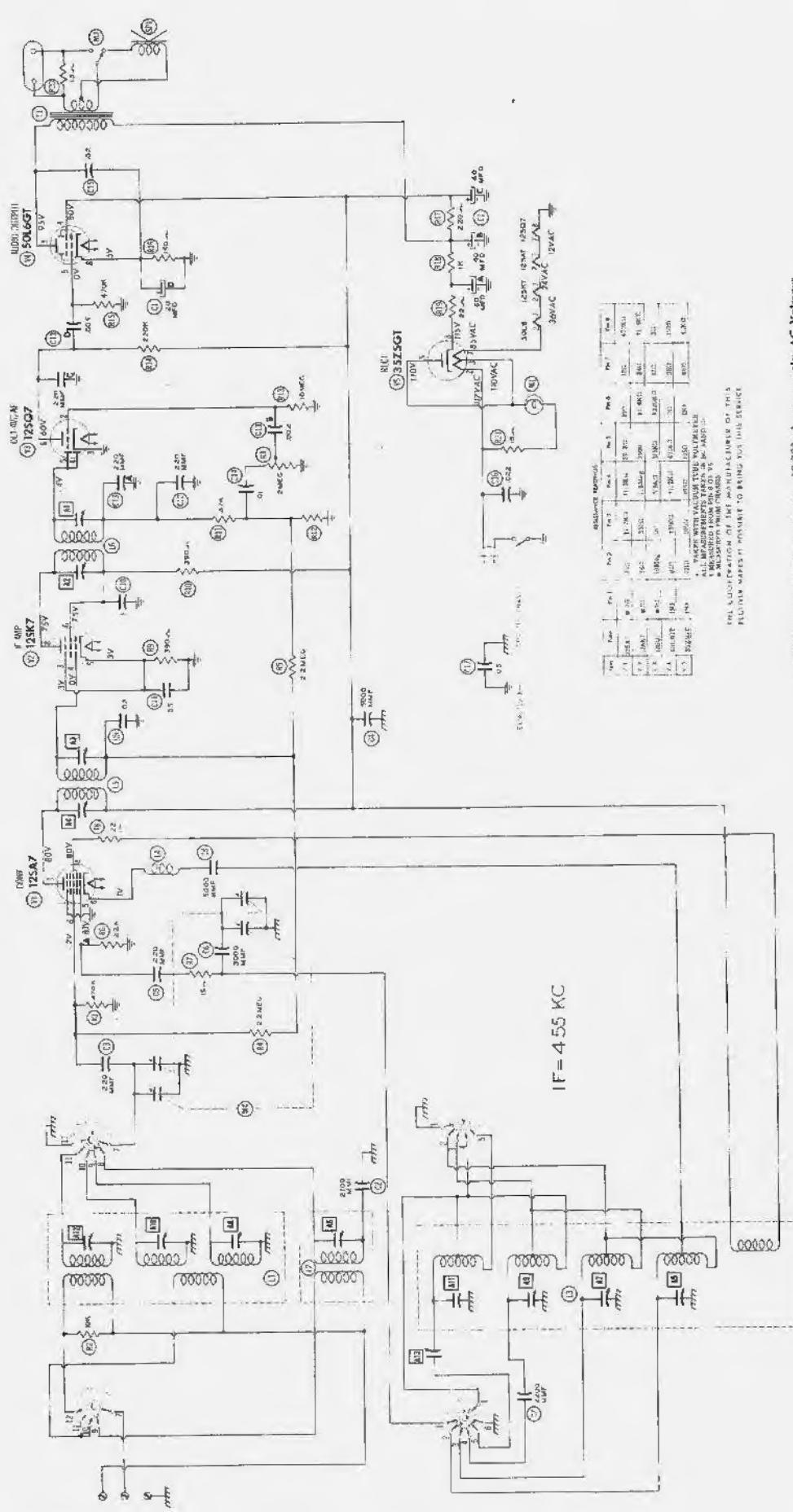


RESISTANCE READINGS							
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6
V 1	12SA7	240	11.2KΩ	11.2KΩ	22.3KΩ	100	120
V 2	12SK7	260	360Ω	1.5MΩ	360Ω	1.5MΩ	240
V 3	12SQ7	10MΩ	26	51KΩ	51KΩ	110KΩ	100
V 4	50L6GT	IN	750Ω	11.2KΩ	47KΩ	90	360
V 5	35Z5GT	120	100Ω	100Ω	100Ω	INF	4KΩ

* TAKEN WITH VACUUM TUBE VOLTOMETER
ALL MEASUREMENTS TAKEN IN BC BAND (A)
† MEASURED FROM PIN 8 OF VS
‡ MEASURED FROM CHASSIS

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RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

- DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms per volt.
- Socket connections are shown as bottom views.
- Measured values are from socket pin to common negative.
- Line voltage maintained at 117 volts for voltage readings.
- Nominal tolerance on component values makes possible a variation of $\pm 10\%$ in voltage and resistance readings.
- Volume control at maximum, no signal applied for voltage measurements.



1. D.C. voltage measurements, using a millivoltmeter, or current measurements, using an ammeter.

2. Solder connections are shown at bottom right. Terminals are from socket pin to common negative. Terminals are maintained at 1.17 volt for voltage reading.

3. Individual reference or component voltage makes possible a variation of 1.17 volt in both voltage and resistance readings.

4. 1.17 volt in both voltage and resistance readings.

5. Voltage control at maximum, no signal applied for voltage measure-

6. ments.

THE CONFIGURATION OF THE MOUNTAIN RANGES IN FLORIDA IS POSSIBLE TO OBTAIN BY A SIMPLE SERVICE

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